Notice of Allowability	Application No.	Applicant(s)	
	10/099,812	SHORT, KEVIN M.	
	Examiner	Art Unit	
	Jenise E. Jackson	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *1/13/06*.

2. ☒ The allowed claim(s) is/are *1-5 and 11-21*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date 02012006
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

Reasons For Allowance

1. Status of Claims: Claims 6-10 have been canceled. Claims 16-21 have been added. Claims 1 and 11 have been amended.

2. The reasons claims 1-5, 11-21 are allowable are listed below:

3. The prior art of Bianco discloses sending all of the variables used by the encryptor to the decryptor so that the decryptor knows exactly what initial iteration and tuning parameter is used to encrypt the data. The decryptor is dependent on the initial state of the encryptor. Bianco discloses that changing the value of the initial state and the tuning parameter will result in a totally different sequence. In contrast to the claim invention, that claims, "the first chaotic system to assume a periodic orbit independent from the initial state of the first chaotic system", and "to drive the second chaotic system into synchrony with the first chaotic system independent from the initial state of the second chaotic system". Bianco discloses that the chaotic systems are synchronized with the same initial state. The second chaotic system of Bianco is dependent on the first chaotic system, because the second system used the same initial state as the first. Also, Bianco discloses the encryption sequence, the parameter and the initial state have upper and lower limits of the iterate range and initialization count are supplied as a cryptographic key. The midpoint between the upper and lower limits is calculated and used by the domain transformation process. A random starting point is created which is nonrepeatable between encryption sessions. Further, the same value is always given to both chaotic systems.

4. The prior art of non-patent literature of Cuomo teaches a chaotic system is self-synchronizing if it can be decomposed into at least two subsystems: a drive system(transmitter) and a receiver that synchronize when coupled with a common signal. Cuomo teaches a system

to transmit and recover binary valued bit streams, by modulating a transmitter coefficient with the information bearing waveform and to transmit the chaotic drive signal. At the receiver, the coefficient modulation will produce a synchronization error between the received drive signal and the receiver's regenerated drive signal with error signal amplitude that depends on the modulation. In contrast to the claim invention, that claims, "the first chaotic system to assume a periodic orbit independent from the initial state of the first chaotic system", and "to drive the second chaotic system into synchrony with the first chaotic system independent from the initial state of the second chaotic system". Cuomo also teaches that the chaotic systems are synchronized with the same initial state.

5. Non-patent literature of Lai teaches that two systems can start with different initial conditions. However, the claims call for the initialization code is the same for the first and second system. However, synchronizing the system is independent of the initial state. Lai teaches that the initial state is used to drive the system into synchronization. The initial state has to be transmitted in Lai, in order to synchronize the system with another.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenise E. Jackson whose telephone number is (571) 272-3791. The examiner can normally be reached on M-Th (6:00 a.m. - 3:30 p.m.) alternate Friday's.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (571) 272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 1, 2006

AYAZ SHEIKH
SUPERVISORY PATENT EXAMINER
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